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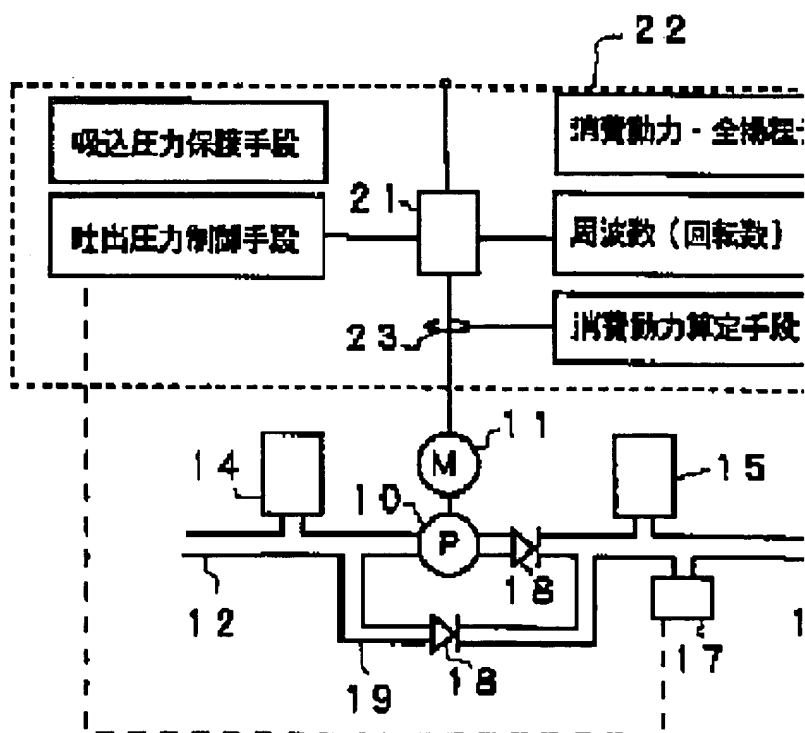
(54) PUMP DEVICE

(57) Abstract:

PURPOSE: To enable measurement of suction pressure in a pump without installing a pressure detector at an inlet side of the pump as well as make the compactification of a device structure achievable by calculating the suction pressure from those of discharge pressure, power consumption and rotational frequency of this pump.

CONSTITUTION: A pump 10 is variably controlled by an inverter 21 and a motor 11, and it is variably operated at an optional speed. In addition, it is provided with a pressure transmitter 17 at the discharge side and controlled so as to make pressure at the pump discharge side become constant by a signal of a control unit 22. In addition, it is also provided with a suction side pressure tank 14, a discharge side pressure tank 15, a check valve 18 or the like, through which an output current of the inverter 21 is detected by a current converter 23 and fed to the control unit 22 which is equipped with a calculating means of power

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consumption, calculating this power consumption of the pump 10 from an output voltage and an output current of the inverter 21. Rotational frequency of the pump 10 is calculated from the frequency of an ac current to be fed to the motor by the inverter 21, while discharge pressure of the pump 10 is obtainable from the discharge side pressure transmitter 17.

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